**TCTAP C-227****A Case of TEVAR for Type B Aortic Dissection via Very Useful IVUS**Akimitsu Tanaka

Nagoya Tokusukai General Hospital, Japan

[Clinical Information]**Patient initials or identifier number:**

A.I.

Relevant clinical history and physical exam:

A man aged 61 visited a hospital because he had a sudden leg pain and lumbago. His left leg pulse was weak and pale.

Relevant test results prior to catheterization:

CT revealed type B aortic dissection and his lower limb arteries were not enhanced by contrast. In chemistries, the value of CPK was elevated. So he underwent F-F bypass to rescue his limb. The operation was finished safely. But his renal function was worsen remarkably because of malperfusion (Malperfusion is a ischemia of branch artery caused by dissection). Therefore he needed to undergo dialysis. Finally, we decided to do TEVAR to close the entry of dissection.

Relevant catheterization findings:

The angiography showed that there was very large entry at the distal arch and very small reentry at the right common iliac artery. Besides, there were some reentry parts between them.

[Interventional Management]**Procedural step:**

We inserted IVUS after crossing wire. Because of that we could understand the position of the wire and dissection lumen precisely, so we finished closing entry of dissection with TEVAR safely and certainly.

Case Summary:

It is essential to know the position of entry on TEVAR for aortic dissection. On top of that, we need to know whether the wire was always in the true lumen or not, and whether some abdominal arteries (celiac artery, SMA, renal artery) branch from true lumen or false lumen. If we deployed stentgraft across the wall between true lumen and false lumen, it could be fatal. It is difficult to know where the wire is crossed only via using angiography. Then, it is very useful to use IVUS. Moreover, using IVUS can make contrast to confirm the position less. So it is particularly useful when we treat patients with renal failure caused by malperfusion.

TCTAP C-228**Successful Closure of Post-myocardial Infarction Ventricular Septal Defect with Transcatheter Occluder**Yu-Chen Wang, Ping-Han Lo

National Taiwan University Hospital, Taiwan

[Clinical Information]**Patient initials or identifier number:**

L-J-Z

Relevant clinical history and physical exam:

The 69 y/o woman is a patient with history of HTN, hyperlipidemia, gastric ulcers, L't acoustic neuroma s/p OP with L't facial palsy, and ESRD s/p CAPD. In 2012/12, she was admitted due to NSTEMI and cardiogenic shock, and coronary angiography showed CAD, 2 vessel diseases status post DES stenting to RCA. However, echocardiography after PCI showed muscular type VSD with left to right shunt. After

consulting cardiovascular surgeon, conservative treatment with close monitoring was suggested due to DES stenting and current dual-antiplatelet agents usage. 2 weeks later, she was discharged under relatively stable condition.

After discharge, echocardiography 3 months later showed persistent muscular VSD with left to right shunt. However, this patient refused surgery and preferred minimal invasive treatment. Therefore, she was admitted for elective VSD occluder replacement

Physical examination:

Mental state: alert and well oriented; E4 M6 V5

Vital signs :BT: 35.7 °C, BP: 115/76 mmHg, PR 69/min, RR 18/min

HEENT: pink conjunctivae, anicteric sclera, *left eye blindness

Chest: symmetric expansion, no wheezing or crackle over bilateral lung field

Heart: regular heart beats, * a grade 3-4/6 systolic murmur over LLSB

Abdomen: normoactive bowel sound, no tenderness or rebounding pain

Extremities: warm extremities, no pitting edema

Pulsation: RA 2/2, FA 2/2, PA 2/2, DP 2/2, PT 2/2

Relevant test results prior to catheterization:

Echocardiography follow up 3 months later after PCI:

Depressed LV systolic function (EF 41%, WMSI=1.5)

Trace TR, MR

Persistent muscular VSD, left to right shunt

Relevant catheterization findings:

Hemodynamic:

PA=39/18. AO=86/52 mmHg. Qp/Qs=2.38

Coronary Angiography: - Dominant (R't)

- LM -Normal

- LAD -Diffuse atherosclerotic changes without significant lesion

- LCX -Normal

- RCA -Proximal and mid-RCA had atheroma, distal RCA had a patent stent

- Ramus -Nil

- Collateral -Nil

Others(Selective Angiography):

LV angiography: VSD near LV apex, left to right shunt

[Interventional Management]**Procedural step:**

1. Under TEE guidance.
2. A 300cm Terumo wire was advanced through a 6F JR4 catheter, inserted via RFA into LV across the VSD into pulmonary artery.
3. The wire was snared out through RFV by a Goose Neck snare.
4. Size of the VSD was measured by a sizing balloon.
5. A 16mm Muscular VSD occluder was then deployed at the VSD by standard technique.
6. Persistent VT induced by the delivery catheter was terminated by 100J Cardioversion.

Valvular Heart Disease (TCTAP C-229 to TCTAP C-235)

TCTAP C-229**Complete Recovery of Severely Impaired LV Function Post TAVI**Ali Almasood

Prince Sultan Cardiac Center, Saudi Arabia

[Clinical Information]**Patient initials or identifier number:**

A.T.

Relevant clinical history and physical exam:

55 years old man, admitted to the hospital with progressive shortness of breathing over one year. Clinically he was in congestive heart failure, edematous, massive ascites and bilateral pleural effusion.

Relevant test results prior to catheterization:

Laboratory abnormal finding were very high PcrBNP, and low sodium

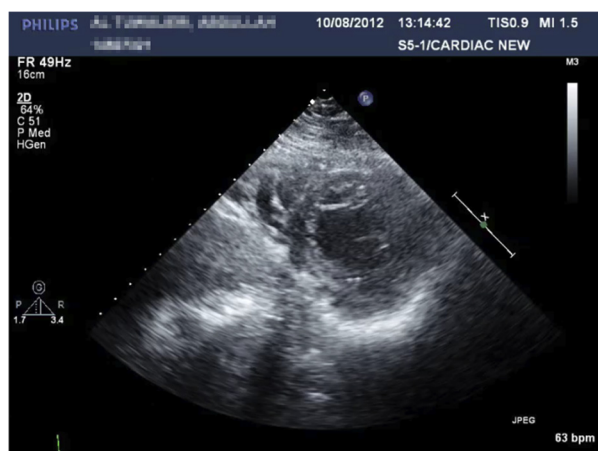
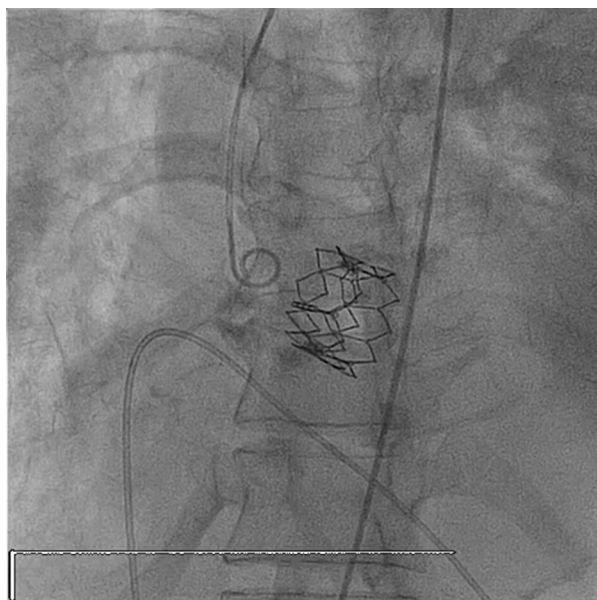
Echocardiogram showed severely immured LV systolic function EF of 15%, verily degenerative Ao Valve, with gradient of 50mmHg (mean) and area of 0.6cm².

Relevant catheterization findings:

Coronary angiogram are normal.

[Interventional Management]**Procedural step:**

Sapien Edwards Valve size 26 was deployed successfully without complication and follow up 3 months echo showed complete recovery of LV function.

**Relevant clinical history and physical exam:**

This is a 72 years old lady with HT, DM, Hyperlipidemia and IHD. She had CABG to LAD, OM and RCA 10 years ago. She also has degenerative valvular AS and present with dizziness and occasional angina. There was progressive deterioration in her symptoms. Physical examination revealed a slow rising and small pulse volume pulse. There was systolic murmur 4/6 in the aortic area radiating up to the neck and the apical impulse was of pressure overload type.

Relevant test results prior to catheterization:

Echo confirmed severe AS (AVA = 0.69 cm square) with LVH and EF of 50%, moderate MR and PHT.

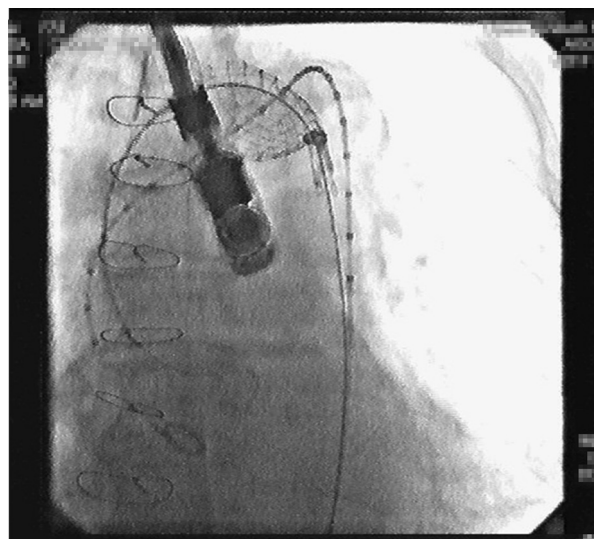
Coronary angiogram showed blocked graft to LAD; patent SCG to OM and mild diseases of RCA graft. Her Euroscore II for open heart surgery was 30%. So we performed PCI to the LMN and LAD lesions first with drug eluted stents, then for staged TAVI procedure of Corevalve 26 mm (Medtronic Ltd)

Relevant catheterization findings:

The catheterization showed severe gradient across the aortic valve (mean gradient >50 mmHg)

[Interventional Management]**Procedural step:**

- 1) General Anesthesia
- 2) TEE guide
- 3) 18 F RFA
- 4) Temporary Pacer
- 5) Nucleus Balloon predilatation
- 6) Implantation of 26 mm CoreValve
- 7) The CoreValve moved down to the LV during positioning and we needed to pull the Valve upwards
- 8) Sudden embolization of the Valve UP to the Aortic Arch
- 9) Need to retrieve the CoreValve carefully into the sheath in the Abdominal Aorta
- 10) Valve was STUCKED in the descending thoraco-abdominal aorta and cannot be retrieved
- 11) The Corevalve was deployed in the descending aorta successfully; with maintaining the Stiff Guidewire position
- 12) Another Valve was then deployed at the Aortic Root
- 13) Aortogram; trivial paravalvular leak the Abdominal Corevalve function well with no gradient
- 14) Review of CT Scan showed heavily calcified descending aorta.

**TCTAP C-230****A Case of Ectopic Core Valve Implantation**

Kam-Tim Chan, K. Y. Lee
Queen Elizabeth Hospital, Hong Kong, China

[Clinical Information]

Patient initials or identifier number:

Y1234